

School Advisory from California Classrooms Study

The environmental conditions in classrooms can have a major impact on occupants' health and productivity. The Air Resources Board (ARB) and Department of Health Services (DHS) recently completed a study of the environmental health conditions in California portable and traditional classrooms, and found a number of widespread problems that need to be addressed. The majority of the problems identified in the study can be remedied quickly at little or no cost, while others require planning and budgeting by schools.

Below are some key suggestions and links to help schools and school districts assure a healthful and productive learning environment for their students.

How do we know if we have a problem? Where do we start?

- **First, assess your school's indoor environmental conditions.** There are some easy-to-use checklists available free of charge that can help you conduct your own assessment.
 - ◆ U.S. EPA's *Indoor Air Quality (IAQ) Tools for Schools (TFS) Action Kit* — <http://www.epa.gov/iaq/schools/>.
 - ◆ Los Angeles Unified School District's "Safe School Inspection Guidebook" — <http://www.lausd-oehs.org/docs/SafetyInspections/InspectionGuidebook.pdf>. After LAUSD's first round of self-inspections, LAUSD officials determined that many basic health and safety problems could be remedied by custodians or other school personnel, generally at little or no additional cost.
- **Be sure your school complies with current state workplace regulations**, especially those related to mechanical ventilation (<http://www.dir.ca.gov/title8/5142.html>) and sanitation and moisture intrusion (<http://www.dir.ca.gov/title8/3362.html>) (see especially item "g" on mold). For assistance with interpreting and meeting workplace regulations, contact Cal/OSHA's consultation service at <http://www.dir.ca.gov/DOSH/consultation.html>, or call 1-800-963-9424.
- **Prepare a plan for addressing problems** found in your self-assessment, using EPA's TFS planning process or other similar approaches to develop the plan. Set a schedule for tackling the most critical problems, and put someone in charge to see that it happens.

Are there specific ways to establish and maintain healthy classrooms?

Yes, some key actions can go far to assure a healthful environment. It is important to address each of the following activities:

- **Operations and Maintenance**
 - ◆ Provide sufficient ventilation to the classroom, per Cal/OSHA regulations at <http://www.dir.ca.gov/title8/5142.html>, and the State Energy Code Title 24 regulations at <http://www.energy.ca.gov/title24/index.html> (see 2001 and 1998 standards, depending on the age of the classroom, and 2005 standards for new classrooms). Assure that ventilation systems are not too noisy (under 45 decibels); ask for help from the manufacturer if needed.
 - ◆ Provide or obtain training for district and school facility managers (on routine maintenance), custodial staff (on proper vacuuming and cleaning procedures: <http://www.epa.gov/iaq/schools/tfs/building.html#Floor%20Cleaning>) and teachers (on avoiding pollutant sources in the classroom). Start by using EPA's TFS kit.

- ◆ Reduce the use of pesticides and noxious cleaning products. Implement an Integrated Pest Management Program (<http://www.cdpr.ca.gov/cfdocs/apps/schoolipm/main.cfm>).
- ◆ Reduce classroom formaldehyde levels: see the ARB-DHS advisory “Remedies for Reducing Formaldehyde in Schools,” http://www.arb.ca.gov/research/indoor/pcs/formald_remedies.pdf.

➤ Purchasing

- ◆ Order materials and products that emit little or no formaldehyde and other potentially harmful chemicals. Specify products that meet California’s Section 01350 emissions requirements: see http://www.chps.net/manual/documents/Sec_01350.doc for current requirements, and http://www.chps.net/manual/documents/Notes_sec01350.doc for accompanying notes.
- ◆ Do not allow the use of room deodorizers (especially plug-ins), candles, hair spray, or other unnecessary products in classrooms that can emit harmful chemicals.
- ◆ Arrange to air out new furnishings, especially carpet, prior to installation.

What about new schools and renovation projects?

➤ Design and Construction

- ◆ When planning and constructing new schools or renovating classrooms, see the Collaborative for High Performance Schools’ *Best Practices Manual* sections on school siting, materials selection, and ventilation (<http://www.chps.net>). Establish a policy that all new construction and modernization projects will be CHPS certified.
- ◆ Specify no- or low-formaldehyde building materials and furnishings. Specify materials and products that meet the Section 01350 emissions requirements for gaseous chemicals, at the links shown above under “Purchasing”.
- ◆ Specify low noise, energy efficient ventilation systems and lighting systems (under 45 decibels combined). Teachers cannot teach with noisy mechanical systems in their rooms: the added incremental cost of low noise systems is well worth the investment.

Where Can I Go for More Information?

- For more information on the problems identified in the California Portable Classrooms Study and recommendations to remedy them, visit the study web site at: <http://www.arb.ca.gov/research/indoor/pcs/pcs.htm>.
- For a listing of private sector indoor air quality consultants, visit <http://www.dhs.ca.gov/iaq>, and click on IAQ Consultants Listing.
- For information on developing sustainable schools, visit <http://www.sustainableschools.dgs.ca.gov/SustainableSchools/>.



For more information, contact the ARB’s Public Information Office at (916) 322-2990.